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INTERNATIONAL EXCHANGE MARKETS

SUMMARY

Over a decade ago the Bretton Woods System of fixed exchange rates crumbled, resulting in a new system of floating exchange rates that emerged in the spring of 1973. Despite the unrealistic euphoria of economists as floating began, and the gloom-and-doom attitude of some businessmen and governments, the system continues to work adequately, but not perfectly. The yen-dollar exchange rate, however, always becomes an issue when economic tensions build up between Japan and the United States, with accusations that the Japanese are deliberately holding down the value of the yen in order to promote exports.

In two earlier JEI publications (Council Report No. 49, October 25, 1978 and Council Report No. 7, March 23, 1979), we dealt with the theoretical issues behind exchange rates and argued that floating rates were operating well, even if not as well as originally envisioned by economists. Although that view was not universally held in 1978, few people today seem to challenge the floating rate system per se. Since that writing, though, Tokyo's role as an international monetary center has changed significantly. This JEI Report will analyze these changes and discuss current exchange-rate policy in Japan.

Tokyo's Foreign-Exchange Controls

Beginning in the late 1960s, the Japanese government began removing restrictions on currency exchange and international capital flows with the result that the pace accelerated considerably in the next ten years. The new Foreign Exchange Control Law that went into effect in December 1980 ratified many of the changes that had already taken place, enabling the government to continue to work toward the removal of controls. The principal changes of the past five years are summarized below:

- Bond purchases by nonresidents were liberalized in 1979.
- Rates on nonresident yen deposits were liberalized in 1980. Reserve requirements on nonresident yen deposits were also lowered.
- The limit on Euroyen deposits that could be transferred from overseas branches of Japanese banks and held in Japan was increased in 1979.

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- Nonresidents were allowed to invest in the gensaki market (a short-term market involving sale and repurchase of long-term government bonds) in 1979.

- Certificates of Deposit were created in 1979, primarily to aid foreign banks in acquiring yen funds.

- Investment by nonresidents in Japanese corporate equities was further liberalized in 1980, leaving only 11 companies where the total amount of foreign ownership was to be limited.

These and other changes have added up to a considerable increase in the freedom of international capital flows and in the attractions of Japan as a market for investment. The authorities have retained some controls, however, which may be tightened or relaxed depending on government policy. Among the major controls still in place are the following:

- The Ministry of Finance (MOF) exercises administrative guidance over overseas loans in yen or foreign currency by Japanese banks, ostensibly to control exposure to default risk. Actually, the MOF can use this authority to control capital flows.

- There are limits on the total amount of yen-denominated bonds per quarter that can be issued in Japan by foreign entities ("samurai bonds"), as well as on the types of eligible issuing organizations.

- The MOF uses administrative guidance to limit purchases of foreign securities by Japanese insurance companies.

- The amount of foreign currency deposits each foreign and Japanese bank can convert into yen is controlled.

- Administrative guidance is used to control the volume of new Eurobond issues by Japanese companies.

- The government placed an emergency prohibition on Japanese purchases of foreign zero-coupon bonds in 1982. The motivation for buying the bonds, however, has now largely evaporated.

The list of residual controls, plus other more minor ones, sounds impressive, but as liberalization has created a large international financial market, the ability of the government to influence the size of capital flows has diminished.

The Emergence of Tokyo as a Financial Center

By almost any measure, there is no comparison between Tokyo's markets today and in the early 1970s. The decade has seen a tremendous rise in the volume of international transactions. Looking first at spot transactions on the Tokyo foreign-exchange market, the change is quite striking. The data in Table 1 show the daily volume of transactions since the early 1970s. From an average daily business of $73 million, transactions in 1982 have averaged $1.39 billion per day — a 31-percent annual growth in transactions. This spurt actually began in the second half of the 1970s; annual growth from 1976 to 1982 was 48 percent. Some of the increase in currency transactions is related to merchandise trade, but the growth of trade has been far lower than the steep rise in currency transactions. From 1971 to 1981, for example, Japanese exports grew at 15 percent, only half the rate of growth recorded by currency volumes.

Even these data do not capture the full increase in activity, as the spot market figures are for interbank transactions. What are called third-party transactions, between a bank and its customers or between a domestic bank and overseas banks, do not enter into the Tokyo interbank data. The third-party market is actually twice as large as the interbank market, and has grown rapidly at a 46-percent rate from 1977 through 1981.[1]

Tables 2, 3 and 4 provide further evidence of Japan's increasing integration into world financial markets and underscore the importance of capital movements in currency supply and demand. Table 2 presents data on the size of nonresident yen deposits at Japanese banks plus all foreign currency deposits at Japanese banks. Although these data do not provide a breakdown, about 16 percent of total deposits at the present time is in the form of nonresident yen deposits and 84 percent is in foreign currency deposits. These categories together expanded at a 24-percent annual rate for the decade, with a dramatic rise in 1980 when the new Foreign Exchange Control Law went into effect and reserve requirements and interest-rate restrictions were eased on nonresident yen deposits.

Turning to capital flows, Table 3 provides data on the annual change in Japanese long-term financial assets reported in the balance-of-payments statistics. These numbers represent the net increase in Japanese ownership of foreign assets (capital outflow). Annual growth of this statistic averaged 26 percent over the 1971-1981 period. Certain forms of capital outflow have grown rather dramatically; ownership of foreign securities began mushrooming in 1978 to a net increase in 1981 of $8.7 billion, compared to a miniscule $0.1 billion as recently as 1976. Loans and direct investment grew at rate roughly similar to total long-term capital outflow.

Portraying the reverse side of the picture, Table 4 gives data on the net change in Japan's international long-term capital liabilities. The annual change in liabilities grew at an average 30-percent rate, comparing 1981 to 1971, but the pace of change was very uneven and did not really expand significantly until 1979. Whereas some components, including loans, trade credit, direct investment and Japanese bond issues abroad have not grown at a consistent pace, net foreign purchases of Japanese securities have exploded. As with other forms of capital flow, the most dramatic changes have taken place since 1978, with the net increase growing at a 109-percent rate over the 1978-1981 period. Behind the net increase in foreign securities holdings lies a much larger volume of buying and selling activity, as detailed in Table 4. Purchases of Japanese securities, for example, were 36 times larger in 1981 than in 1971.

All of these indicators of currency and capital flow movements confirm that Tokyo has evolved into a much more important international financial center than it was a decade earlier, with the most rapid shifts coming at the end of the 1970s. The remaining controls and the continued paucity of financial instruments relative to some other countries suggest that Japan's financial system may be still less open internationally, but it is clearly moving rapidly beyond the tightly controlled conditions under which it operated a few years ago.

The Shifting Value of the Yen

Since floating began in 1973, the yen has fluctuated as much or more than other currencies. The size of these swings has been a surprise to economists. Chart 1 provides a graphic view of the wide range in the yen's value since the beginning of 1978. After reaching a record peak of ¥176=$1 in October 1978, the yen declined steadily to ¥250 by late 1979. In the spring of 1980, it began a sustained recovery, approaching ¥200 by the end of the year. In 1981, though, it once again weakened steadily, interrupted only

by a short burst of strength from August to early December, and since then has been falling. At this writing, the yen is lower than it has been since 1977. Behind these wide shifts have been dramatic movements in Japan's current account and in Japanese and U.S. interest rates. Economists have used a wide variety of different models to explain exchange-rate movements with varying degrees of success. While it is not the purpose of this report to review detailed exchange-rate models and their estimation, two brief comments are appropriate here.

First, confusion has arisen over the role of current-account surpluses and deficits in affecting exchange rates. The current balance represents the net demand for currency resulting from merchandise and services trade activity. If the balance is positive, it implies these trade transactions have resulted in foreign demand for the country's currency to pay for imports that is greater than the trade-generated supply of the currency (payments abroad for the country's imports from the rest of the world). This net excess demand for the currency should, all other factors being constant, push the value of the currency up. The reverse holds for a current-account deficit.

For some periods the current account has been a good indicator of the movement of the yen: the appreciation of 1978 was fueled by large surpluses; the depreciation of 1979 by oil-price-generated deficits; and the appreciation of 1980 by the narrowing of current-account deficits and the expectation of a strong movement back to surplus. That relationship was broken in 1982, however, as the yen sank while surpluses continued. Why? As shown above, transactions related to capital movements have become increasingly important in the total supply and demand for currency. Hence the trade-related net currency demand can be offset (or reinforced) by the capital movement-related net currency demand. Widening interest-rate differentials between Japan and the United States in 1981 and 1982 led to large capital outflows which more than offset what otherwise would have been an upward pressure on the yen from the current-account surpluses.

Second, government officials, upset over the bilateral trade-balance implications of the low value of the yen, have used an implicit purchasing power parity (PPP) argument to explain the situation. The PPP doctrine claims to predict where the exchange rate should be on the basis of relative inflation rates in Japan and the United States. But this argument, too, ignores the very real and large role of capital flows in affecting exchange rates. As outlined earlier (see JEI Report No. 7A, February 19, 1982), if Japan is to be a net exporter of capital to the rest of the world, then it must run a current-account surplus to finance that outflow. Therefore, a value of the yen yielding a surplus may represent an equilibrium position for Japan, although this is not encouraging news for trade officials. In any case, there are very valid economic reasons for the yen's depreciation, in contrast to recurring arguments that the Japanese government is deliberately holding the yen down.

Exchange Rate Manipulation

With the establishment of floating currencies, governments have attempted in varying degrees to affect the open-market fluctuation. In fact, in the mid-1970s these activities were presumed to be so extensive that the term "dirty" floating was used. The Japanese have been accused by Americans of manipulating the yen in such a way as to keep its value low to enhance the price competitiveness of Japanese exports. When the yen was first revalued in 1971 and allowed to float in 1973, there is no doubt that Japanese government officials were distraught; a stable, fixed exchange rate was considered to be vitally important in Japan. Even as late as 1978, the Prime Minister said officially that he preferred fixed exchange rates. Now both the attitude of the

Japanese government and its ability to impose its attitudes on exchange-market developments are very limited. Governments can attempt to modify exchange rates in only two ways: through direct intervention or by affecting capital movements (by means of interest rates or capital controls).

Intervention — The simplest method of manipulating exchange markets is by direct intervention — buying or selling from official foreign currency reserves to move the exchange rate in the desired direction. Japan has been accused of buying dollars to keep the value of the yen below what it otherwise would be in order to promote the competitiveness of Japanese exports. While there were periods when the Japanese government intervened to slow the rise of the yen, the success of this policy remains inconclusive.

First, the facts do not support the argument that the Bank of Japan has consistently bought dollars to depress the value of the yen. Since 1979, virtually all of the intervention has taken the form of dollar sales to push the yen up or at least try to slow its fall. The only exception was the period in 1980 when the yen climbed strongly toward ¥200=$1. The shrinkage in official foreign-exchange reserves from $28.8 billion in November 1981 to $24.4 billion by the end of August 1982 bears out the yen-support intervention of the past year.

Second, the magnitude of the swings in the value of the yen against the dollar during the late 1970s and early 1980s is roughly comparable to the movement of other currencies. Had intervention been successful, these movements would have been dampened. Even theoretical economic models, in fact, suggest that intervention may not work. A recent study of different theoretical models of exchange-rate determination, and empirical tests using them, found very little evidence of effective intervention. While the authors note that the lack of positive results may be due to inadequate data or modeling, the results nevertheless cast some doubt on the importance of direct market intervention.

A somewhat more sophisticated argument claims that while Japan failed to prevent yen/dollar changes, its patterns of intervention held the yen temporarily at certain levels and thereby caused swift, steep changes when intervention halted. Observation of the exchange market does not support this hypothesis. Those intervals when the yen tended to hold steady on the exchange market did not coincide with intervention, but with periods absent of intervention. When the yen's value is changing quickly, the Bank of Japan intervenes if the movement is in a direction that it deems inappropriate, but rarely has such activity halted or steadied the market trend.

Since intervention is often accompanied by considerably higher volumes traded on the Tokyo exchange, it is entirely possible that the activity (which, unlike the Federal Reserve Board's careful secrecy, is largely known to market participants) succeeds only in bringing in more sellers who want to dump their currency holdings before prices drop any further. Since the beginning of 1980, there have been 26 months when the Bank of Japan intervened in the market; in 21 of these months, the average daily volume was higher on days with intervention. Of the remaining number, very minor intervention was recorded in four of the five cases. If in fact the Bank's interference encourages sellers who would otherwise have kept their holdings, intervention is likely to be counter-productive.

A final point suggests the limited effects of direct intervention. As noted above, the volume of transactions on the Tokyo foreign-exchange market has expanded vigorously. However, the volume of Bank of Japan intervention has not increased. When

the Bank does enter the market, the amount is usually in the $30- to $50-million range, and is only rarely as high as $200 to $300 million. These amounts are no higher than what the Bank was spending several years ago when market volumes were considerably smaller.

The implication of these arguments that intervention does not seem to have much impact on the level, or even the direction of change in the value of the yen is consistent with the Reagan administration's adamant refusal to intervene in exchange markets out of the conviction that they work efficiently. However, work being done in economic theory suggests that exchange rates can overshoot equilibrium values. As in the "dollar rescue" program of November 1, 1978, internationally coordinated intervention may occasionally have the desired effect.

A more indirect way to influence the exchange market is to place a variety of controls on capital movements, using them to offset or reinforce the relative currency demands related to merchandise and services trade. Some observers believe that Japan is able to successfully manipulate the exchange rate in this way. Such a view was recently expressed in Washington by a member of the European Parliament:

> It is clear that we are also dealing with a sophisticated system for the control of capital movements in and out of Japan, and that this system can have no other purpose but to determine the level of the yen in international trade. It works brilliantly — as indeed similar practices have worked brilliantly in Switzerland and (in the past) in West Germany. [emphasis added][2]

That leaves one major question unanswered: if the system worked so well, why have the yen-dollar fluctuations been so large? The fact is that the remaining capital controls simply are not extensive enough to counteract market-determined flows based on relative interest rates and other economic factors.

The inability or indifference on the part of the Bank of Japan to manipulate exchange rates is illustrated by research studies by the International Monetary Fund. Using spot and forward yen markets in Japan and London (where Japanese intervention or other attempts to affect exchange do not apply), economists Otani and Tiwara concluded that there is some evidence that exchange rates were manipulated prior to 1979, but that since then the evidence generally does not support such an hypothesis. Their research was based on the theoretical relationship between the spot and forward rates and between domestic and foreign interest rates.[3] Existing capital controls have been used (to little avail) to stem capital outflow. Administrative guidance on overseas bank loans, guidance on insurance company securities purchases and the prohibition on zero-coupon bond purchases were intended to serve this purpose.

Japan's inability to stem capital outflow and thus push up the yen's value is in fact a demonstration of the weakness of remaining controls and not a desire to reduce the value of the yen. C. Fred Bergsten, in fact, has suggested that the solution is for Japan to use more vigorous controls — declaring a temporary moratorium on all capital outflows.[4] His prescription would work, but it runs counter to the general international liberalization of capital markets. Nor would it solve all of Japan's problems since, as suggested above, Japan might have to remain a capital exporter for some time. Even if Bergsten's suggestion is radical, however, his point is well taken. Under current economic conditions, the yen would fall, not rise, if controls were eliminated, and Bergsten's prescription for more controls is the only feasible one until economic conditions change.

Conclusion

The Ministry of Finance has proceeded very deliberately during the past decade to dismantle international capital controls. It has done so reluctantly, motivated more by the inevitability of Japan's financial integration with the rest of the world than by any firm sense of economic advantage. One of the reasons for the reluctance has been the concern that the government would lose its tight control over domestic monetary policy, and the size of capital movements suggests that liberalization has in fact significantly eroded that control.

As the above analysis demonstrates, the persistent feeling that Japan is deliberately holding the yen down to benefit its exporters exaggerates the effectiveness of monetary policy in the mid-1970s. Moreover, since 1979 the Japanese government has generally wished the yen were higher, not lower. If the Japanese are at fault, it is because of the low level of interest rates in Japan relative to the United States. But these interest-rate levels in Japan are neither for the purpose of promoting exports nor at all out of line considering the level of inflation and the slow economic growth in Japan. The current low value of the yen is an unfortunate result of policy decisions in both Tokyo and Washington taken in both cases for domestic reasons rather than international.

Footnotes

[1] Far Eastern Economic Review, September 24, 1982, p. 67.

[2] W.J. Hopper, M.E.P., "How Do We Cope with Japan's Trade Surpluses" (speech given to the Ripon Society and Bow Group, Washington, D.C., April 24, 1982).

[3] Ichiro Otani and Siddharth Tiwara, "Capital Controls and Interest Rate Parity: The Japanese Experience, 1979-81," IMF Staff Papers, December 1981.

[4] C. Fred Bergsten, "What to Do About the U.S.-Japan Economic Conflict," Foreign Affairs, Summer 1982, p. 1065.

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Table 1

Spot Transactions on the Tokyo Foreign Exchange Market

	Average Daily Market
1971-1975	$ 73 million
1976	131 million
1977	236 million
1978	445 million
1979	656 million
1980	804 million
1981	1,036 million
1982 (Jan.-Sept.)	1,388 million

Source: 1971-1981 from Ichiro Otani, "U.S.-Japan Relations on Capital Markets in the 1980's" in Annual Report, Program on U.S.-Japan Relations; 1982 from JEI data files.

Table 2

International Accounts in Japanese Banks

	Nonresident Yen Deposits Plus Foreign Currency Deposits
1971	¥1.0 trillion
1972	1.9 trillion
1973	2.1 trillion
1974	2.3 trillion
1975	2.6 trillion
1976	2.8 trillion
1977	3.5 trillion
1978	4.8 trillion
1979	4.6 trillion
1980	7.8 trillion
1981	9.1 trillion

Source: Bank of Japan, Economic Statistics Annual

Table 3

The Changing Size of Capital Flows: Growth Long-Term Assets

(in billions of dollars)

Calendar Year	Total	Loans*	Securities	Direct Investment
1971	$ 2.2	$0.6	$0.2	$0.4
1972	5.0	1.7	1.1	0.7
1973	8.5	3.0	1.8	1.9
1974	4.1	1.1	0.1	2.0
1975	3.4	1.3	0.1	1.8
1976	4.6	1.5	0.1	2.0
1977	5.2	0.5	1.7	1.6
1978	14.9	6.3	5.3	2.4
1979	16.3	8.1	5.8	2.9
1980	10.8	2.5	3.7	2.4
1981	22.8	5.1	8.7	4.9

*Non-trade credit loans.

Source: Ministry of Finance, Balance of Payments Monthly

Table 4

The Changing Size of Capital Flows: Growth of Long-Term Liabilities

(in billions of dollars)

Year	Total	Loans	Direct Investment	Japanese Bonds Issued Abroad	Foreign Ownership of Japanese Securities		
					Net Change	Purchases	Sales
1971	$ 1.1	$0.0	$0.2	$0.0	$0.9	$2.2	$1.3
1972	0.5	-0.2	0.2	-0.1	0.7	3.3	2.6
1973	1.1	-0.3	-0.0	-0.2	-0.6	2.0	2.6
1974	0.2	-0.2	0.2	0.0	-0.9	1.1	1.9
1975	3.1	0.2	0.2	1.2	1.5	3.8	2.3
1976	3.6	0.3	0.1	1.5	1.6	5.9	4.4
1977	2.1	-0.3	0.0	1.1	1.3	7.5	6.2
1978	2.5	-0.0	0.0	0.8	1.7	15.6	13.9
1979	3.7	-0.2	0.2	2.2	2.4	26.9	24.5
1980	13.2	-0.2	0.3	1.2	11.9	39.0	27.1
1981	16.4	-0.2	0.2	1.4	15.1	78.3	63.2

Source: Ministry of Finance, Balance of Payments Monthly

Chart 1

The Yen-Dollar Exchange Rate